EPA/540/4-90/020
September 1990

NATIONAL PRIORITIES LIST SITES:
Maine

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Emergency & Remedial Response
Office of Program Management
Washington, D.C. 20460

If you wish to purchase copies of any additional State volumes or the National Overview volume, ***Superfund: Focusing on the Nation at Large***, contact:

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Springfield, VA 22161
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INTRODUCTION:

A BRIEF OVERVIEW

WHY THE SUPERFUND PROGRAM?

As the 1970s came to a close, a series of headline stories gave Americans a look at the dangers of dumping industrial and urban wastes on the land. First there was New York 's Love Canal. Hazardous waste buried there over a 25-year period contaminated streams and soil, and endangered the health of nearby residents. The result: evacuation of several hundred people. Then the leaking barrels at the Valley of the Drums in Kentucky attracted public attention, as did the dioxin tainted land and water in Times Beach, Missouri.

In all these cases, human health and the environment were threatened, lives were disrupted, property values depreciated. It became increasingly clear that there were large numbers of serious hazardous waste problems that were falling through the cracks of existing environmental laws. The magnitude of these emerging problems moved Congress to enact the Comprehensive Environmental Response, Compensation, and Liability Act in 1980. CERCLA — commonly known as the Superfund — was the first Federal law established to deal with the dangers posed by the Nation's hazardous waste sites.

After Discovery, the Problem Intensified

Few realized the size of the problem until EPA began the process of site discovery and site evaluation. Not hundreds, but thousands of potential hazardous waste sites existed, and they presented the Nation with some of the most complex pollution problems it had ever faced.

In the 10 years since the Superfund program began, hazardous waste has surfaced as a major environmental concern in every part of the United States. It wasn't just the land that was contaminated by past disposal practices. Chemicals in the soil were spreading into the groundwater (a source of drinking water for many) and into streams, lakes, bays, and wetlands. Toxic vapors contaminated the air at some sites, while at others improperly disposed or stored wastes threatened the health of the surrounding community and the environment.

EPA Identified More than 1,200 Serious Sites

EPA has identified 1,236 hazardous waste sites as the most serious in the Nation. These sites comprise the "National Priorities List": sites targeted for cleanup under the Superfund. But site discoveries continue, and EPA estimates that, while some will be deleted after lengthy cleanups, this list, commonly called the NPL, will continue to grow by approximately 100 sites per year, reaching 2,100 sites by the year 2000.

THE NATIONAL CLEANUP EFFORT IS MUCH MORE THAN THE NPL

From the beginning of the program, Congress recognized that the Federal government could not and should not address all environmental problems stemming from past disposal practices. Therefore, the EPA was directed to set priorities and establish a list of sites to target. Sites on the NPL (1,236) are thus a rela-

tively small subset of a larger inventory of potential hazardous waste sites, but they do comprise the most complex and environmentally compelling cases. EPA has logged more than 32,000 sites on its National hazardous waste inventory, and assesses each site within one year of being logged. In fact, over 90 percent of the sites on the inventory have been assessed. Of the assessed sites, 55 percent have been found to require no further Federal action because they did not pose significant human health or environmental risks. The remaining sites are undergoing further assessment to determine if long-term Federal cleanup activities are appropriate.

EPA IS MAKING PROGRESS ON SITE CLEANUP

The goal of the Superfund program is to tackle immediate dangers first, and then move through the progressive steps necessary to eliminate any long-term risks to public health and the environment.

The Superfund responds immediately to sites posing imminent threats to human health and the environment at both NPL sites and sites not on the NPL. The purpose is to stabilize, prevent, or temper the effects of a hazardous release, or the threat of one. These might include tire fires or transportation accidents involving the spill of hazardous chemicals. Because they reduce the threat a site poses to human health and the environment, immediate cleanup actions are an integral part of the Superfund program.

Immediate response to imminent threats is one of the Superfund 's most noted achievements. Where imminent threats to the public or environment were evident, EPA has completed or monitored emergency actions that attacked the most serious threats to toxic exposure in more than 1,800 cases.

The ultimate goal for a hazardous waste site on the NPL is a permanent solution to an environmental problem that presents a serious (but not an imminent) threat to the public or environment. This often requires a long-term effort. In the last four years, EPA has aggressively accelerated its efforts to perform these long-term cleanups of NPL sites. More cleanups were started in 1987, when the Superfund law was amended, than in any previous year. And in 1989 more sites than ever reached the construction stage of the Superfund cleanup process. Indeed construction starts increased by over 200 percent between late 1986 and 1989! Of the sites currently on the NPL, more than 500 — nearly half — have had construction cleanup activity. In addition, over 500 more sites are presently in the investigation stage to determine the extent of site contamination, and to identify appropriate cleanup remedies. Many other sites with cleanup remedies selected are poised for the start of cleanup construction activity. Measuring success by "progress through the cleanup pipeline," EPA is clearly gaining momentum.

EPA MAKES SURE CLEANUP WORKS

EPA has gained enough experience in cleanup construction to understand that environmental protection does not end when the remedy is in place. Many complex technologies — like those designed to clean up groundwater — must operate for many years in order to accomplish their objectives.

EPA 's hazardous waste site managers are committed to proper operation and maintenance of every remedy constructed. No matter who has been delegated responsibility for monitoring the cleanup work, the EPA will assure that the remedy is carefully followed and that it continues to do its job.

Likewise, EPA does not abandon a site even after the cleanup work is done. Every

five years the Agency reviews each site where residues from hazardous waste cleanup still remain to ensure that public and environmental health are still being safeguarded. EPA will correct any deficiencies discovered and report to the public annually on all five-year reviews conducted that year.

CITIZENS HELP SHAPE DECISIONS

Superfund activities also depend upon local citizen participation. EPA's job is to analyze the hazards and deploy the experts, but the Agency needs citizen input as it makes choices for affected communities.

Because the people in a community with a Superfund site will be those most directly affected by hazardous waste problems and cleanup processes, EPA encourages citizens to get involved in cleanup decisions. Public involvement and comment does influence EPA cleanup plans by providing valuable information about site conditions, community concerns and preferences.

This State volume and the companion National Overview volume provide general Superfund background information and descriptions of activities at each State NPL site. These volumes are intended to clearly describe what the problems are, what EPA and others participating in site cleanups are doing, and how we as a Nation can move ahead in solving these serious problems.

USING THE STATE AND NATIONAL VOLUMES IN TANDEM

To understand the big picture on hazardous waste cleanup, citizens need to hear about both environmental progress across the country and the cleanup accomplishments closer to home. The public should understand the challenges involved in hazardous waste cleanup and the decisions we must make — as a Nation — in finding the best solutions.

The National Overview volume — ***Superfund: Focusing on the Nation at Large*** — accompanies this State volume. The National Overview contains important information to help you understand the magnitude and challenges facing the Superfund program as well as an overview of the National cleanup effort. The sections describe the nature of the hazardous waste problem nationwide, threats and contaminants at NPL sites and their potential effects on human health and the environment, the Superfund program's successes in cleaning up the Nation's serious hazardous waste sites, and the vital roles of the various participants in the cleanup process.

This State volume compiles site summary fact sheets on each State site being cleaned up under the Superfund program. These sites represent the most serious hazardous waste problems in the Nation, and require the most complicated and costly site solutions yet encountered. Each State book gives a "snapshot" of the conditions and cleanup progress that has been made at each NPL site in the State through the first half of 1990. Conditions change as our cleanup efforts continue, so these site summaries will be updated periodically to include new information on progress being made.

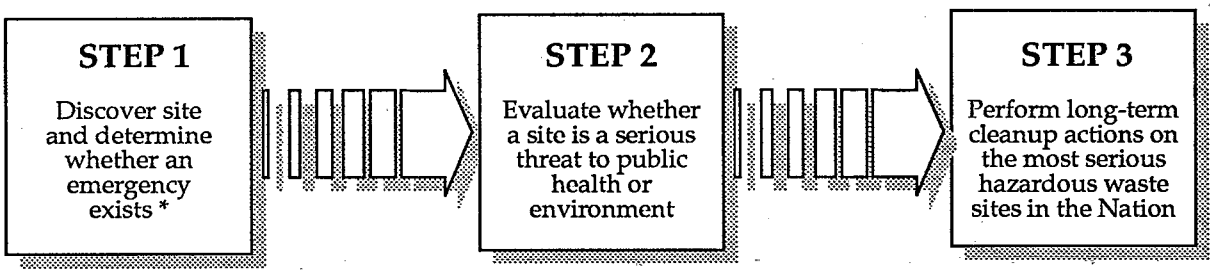
To help you understand the cleanup accomplishments made at these sites, this State volume includes a description of the process for site discovery, threat evaluation and long-term cleanup of Superfund sites. This description — ***How Does the Program Work to Clean Up Sites?*** — will serve as a good reference point from which to review the cleanup status at specific sites. A glossary also is included at the back of the book that defines key terms used in the site fact sheets as they apply to hazardous waste management.

SUPERFUND:

How Does the Program Work to Clean Up Sites?

The diverse problems posed by the Nation's hazardous waste sites have provided EPA with the challenge to establish a consistent approach for evaluating and cleaning up the Nation's most serious sites. To do this, EPA had to step beyond its traditional role as a regulatory agency to develop processes and guidelines for each step in these technically complex site cleanups. EPA has established procedures to coordinate the efforts of its Washington, D.C. Headquarters program offices and its front-line staff in 10 Regional Offices with the State governments, contractors, and private parties who are participating in site cleanup. An important part of the process is that any time during cleanup, work can be led by EPA or the State or, under their monitoring, by private parties who are potentially responsible for site contamination.

The process for discovery of the site, evaluation of threat, and long-term cleanup of Superfund sites is summarized in the following pages. The phases of each of these steps are highlighted within the description. The flow diagram below provides a summary of this three step process.



** Emergency actions are performed whenever needed in this three-step process*

FIGURE 1

Although this State book provides a current "snapshot" of site progress made only by emergency actions and long-term cleanup actions at Superfund sites, it is important to understand the discovery and evaluation process that leads up to identifying and cleaning up these most serious uncontrolled or abandoned hazardous waste sites in the Nation. This discovery and evaluation process is the starting point for this summary description.

STEP 1: SITE DISCOVERY AND EMERGENCY EVALUATION

How does EPA learn about potential hazardous waste sites?

Site discovery occurs in a number of ways. Information comes from concerned citizens — people may notice an odd taste or foul odor in their drinking water, or see half-buried leaking barrels; a hunter may come across a field where waste was dumped illegally. Or there may be an explosion or fire which alerts the State or local authorities to a problem. Routine investigations by State and local governments, and required reporting and inspection of facilities that generate, treat, store, or dispose of hazardous waste also help keep EPA informed about either actual or potential threats of hazardous substance releases. All reported sites or spills are recorded in the Superfund inventory (CERCLIS) for further investigation to determine whether they will require cleanup.

What happens if there is an imminent danger?

As soon as a potential hazardous waste site is reported, EPA determines whether there is an emergency requiring an immediate cleanup action. If there is, they act as quickly as possible to remove or stabilize the imminent threat. These short-term **emergency actions** range from building a fence around the contaminated area to keep people away or temporarily relocating residents until the danger is addressed, to providing bottled water to residents while their local drinking water supply is being cleaned up, or physically removing wastes for safe disposal.

However, emergency actions can happen at any time an imminent threat or emergency warrants them — for example, if leaking barrels are found when cleanup crews start digging in the ground or if samples of contaminated soils or air show that there may be a threat of fire or explosion, an immediate action is taken.

STEP 2: SITE THREAT EVALUATION

If there isn't an imminent danger, how does EPA determine what, if any, cleanup actions should be taken?

Even after any imminent dangers are taken care of, in most cases contamination may remain at the site. For example, residents may have been supplied with bottled water to take care of their immediate problem of contaminated well water. But now it's time to figure out what is contaminating the drinking water supply and the best way to clean it up. Or

EPA may determine that there is no imminent danger from a site, so now any long-term threats need to be evaluated. In either case, a more comprehensive investigation is needed to determine if a site poses a serious but not imminent danger, and requires a long-term cleanup action.

Once a site is discovered and any needed emergency actions are taken, EPA or the State collects all available background information not only from their own files, but also from local records and U.S. Geological Survey maps. This information is used to identify the site and to perform a **preliminary assessment** of its potential hazards. This is a quick review of readily available information to answer the questions:

- Are hazardous substances likely to be present?
- How are they contained?
- How might contaminants spread?
- How close is the nearest well, home, or natural resource area like a wetland or animal sanctuary?
- What may be harmed — the land, water, air, people, plants, or animals?

Some sites do not require further action because the preliminary assessment shows that they don't threaten public health or the environment. But even in these cases, the sites remain listed in the Superfund inventory for record keeping purposes and future reference. Currently, there are more than 32,000 sites maintained in this inventory.

If the preliminary assessment shows that a serious threat *may* exist, what's the next step?

Inspectors go to the site to collect additional information to evaluate its hazard potential. During this **site inspection**, they look for evidence of hazardous waste, such as leaking drums and dead or discolored vegetation. They may take some samples of soil, well water, river water, and air. Inspectors analyze the ways hazardous materials could be polluting the environment — such as runoff into nearby streams. They also check to see if people (especially children) have access to the site.

How does EPA use the results of the site inspection?

Information collected during the site inspection is used to identify the sites posing the most serious threats to human health and the environment. This way EPA can meet the

requirement that Congress gave them to use Superfund monies only on the worst hazardous waste sites in the Nation.

To identify the most serious sites, EPA developed the Hazard Ranking System (HRS). The HRS is the scoring system EPA uses to assess the relative threat from a release or a potential release of hazardous substances from a site to surrounding groundwater, surface water, air, and soil. A site score is based on the likelihood a hazardous substance will be released from the site, the toxicity and amount of hazardous substances at the site, and the people and sensitive environments potentially affected by contamination at the site.

Only sites with high enough health and environmental risk scores are proposed to be added to EPA's **National Priorities List (NPL)**. That's why there are 1,236 sites are on the NPL, but there are more than 32,000 sites in the Superfund inventory. Only NPL sites can have a long-term cleanup paid for from the national hazardous waste trust fund — the Superfund. But the Superfund can and does pay for emergency actions performed at any site, whether *or not it's on the NPL.*

How do people find out whether EPA considers a site a national priority for cleanup using Superfund money?

The public can find out whether a site that concerns them is on the NPL by calling their Regional EPA office at the number listed in this book.

The proposed NPL identifies sites that have been evaluated through the scoring process as the most serious problems among uncontrolled or abandoned hazardous waste sites in the U.S. In addition, a site will be added to the NPL if the Agency for Toxic Substances and Disease Registry issues a health advisory recommending that people be moved away from the site. Updated at least once a year, it's only after public comments are considered that these proposed worst sites are officially added to the NPL.

Listing on the NPL does not set the order in which sites will be cleaned up. The order is influenced by the relative priority of the site's health and environmental threats compared to other sites, and such factors as State priorities, engineering capabilities, and available technologies. Many States also have their own list of sites that require cleanup; these often contain sites not on the NPL that are scheduled to be cleaned up with State money. And it should be said again that any emergency action needed at a site can be performed by the Superfund whether or not a site is on the NPL.

STEP 3: LONG-TERM CLEANUP ACTIONS

After a site is added to the NPL, what are the steps to cleanup?

The ultimate goal for a hazardous waste site on the NPL is a permanent, long-term cleanup. Since every site presents a unique set of challenges, there is no single all-purpose solution. So a five-phase "remedial response" process is used to develop consistent and workable solutions to hazardous waste problems across the Nation:

1. Investigate in detail the extent of the site contamination: **remedial investigation,**
2. Study the range of possible cleanup remedies: **feasibility study,**
3. Decide which remedy to use: **Record of Decision or ROD,**
4. Plan the remedy: **remedial design,** and
5. Carry out the remedy: **remedial action.**

This remedial response process is a long-term effort to provide a permanent solution to an environmental problem that presents a serious, but not an imminent threat to the public or environment.

The first two phases of a long-term cleanup are a combined **remedial investigation and feasibility study** (RI/FS) that determine the nature and extent of contamination at the site, and identify and evaluate cleanup alternatives. These studies may be conducted by EPA or the State or, under their monitoring, by private parties.

Like the initial site inspection described earlier, a remedial investigation involves an examination of site data in order to better define the problem. But the remedial investigation is much more detailed and comprehensive than the initial site inspection.

A remedial investigation can best be described as a carefully designed field study. It includes extensive sampling and laboratory analyses to generate more precise data on the types and quantities of wastes present at the site, the type of soil and water drainage patterns, and specific human health and environmental risks. The result is information that allows EPA to select the cleanup strategy that is best suited to a particular site or to determine that no cleanup is needed.

Placing a site on the NPL does not necessarily mean that cleanup is needed. It is possible for a site to receive an HRS score high enough to be added to the NPL, but not ultimately require cleanup actions. Keep in mind that the purpose of the scoring process is to provide a preliminary and conservative assessment of *potential* risk. During subsequent site investigations, the EPA may find either that there is no real threat or that the site does not pose significant human health or environmental risks.

How are cleanup alternatives identified and evaluated?

EPA or the State or, under their monitoring, private parties identify and analyze specific site cleanup needs based on the extensive information collected during the remedial investigation. This analysis of cleanup alternatives is called a **feasibility study**.

Since cleanup actions must be tailored exactly to the needs of each individual site, more than one possible cleanup alternative is always considered. After making sure that all potential cleanup remedies fully protect human health and the environment and comply with Federal and State laws, the advantages and disadvantages of each cleanup alternative are carefully compared. These comparisons are made to determine their effectiveness in the short- and long-term, their use of permanent treatment solutions, and their technical feasibility and cost.

To the maximum extent practicable, the remedy must be a permanent solution and use treatment technologies to destroy principal site contaminants. But remedies such as containing the waste on site or removing the source of the problem (like leaking barrels) are often considered effective. Often special pilot studies are conducted to determine the effectiveness and feasibility of using a particular technology to clean up a site. Therefore, the combined remedial investigation and feasibility study can take between 10 and 30 months to complete, depending on the size and complexity of the problem.

Does the public have a say in the final cleanup decision?

Yes. The Superfund law requires that the public be given the opportunity to comment on the proposed cleanup plan. Their concerns are carefully considered before a final decision is made.

The results of the remedial investigation and feasibility study, which also point out the recommended cleanup choice, are published in a report for public review and comment. EPA or the State encourages the public to review the information and take an active role in the final cleanup decision. Fact sheets and announcements in local papers let the community know where they can get copies of the study and other reference documents concerning the site.

The public has a minimum of 30 days to comment on the proposed cleanup plan after it is published. These comments can either be written or given verbally at public meetings that EPA or the State are required to hold. Neither EPA nor the State can select the final cleanup remedy without evaluating and providing written answers to specific community comments and concerns. This "responsiveness summary" is part of EPA's write-up of the final remedy decision, called the Record of Decision or ROD.

The ROD is a public document that explains the cleanup remedy chosen and the reason it was selected. Since sites frequently are large and must be cleaned up in stages, a ROD may be necessary for each contaminated resource or area of the site. This may be necessary when contaminants have spread into the soil, water and air, and affect such sensitive areas as wetlands, or when the site is large and cleaned up in stages. This often means that a number of remedies using different cleanup technologies are needed to clean up a single site.

If every cleanup action needs to be tailored to a site, does the design of the remedy need to be tailored too?

Yes. Before a specific cleanup action is carried out, it must be designed in detail to meet specific site needs. This stage of the cleanup is called the **remedial design**. The design phase provides the details on how the selected remedy will be engineered and constructed.

Projects to clean up a hazardous waste site may appear to be like any other major construction project but, in fact, the likely presence of combinations of dangerous chemicals demands special construction planning and procedures. Therefore, the design of the remedy can take anywhere from 6 months to 2 years to complete. This blueprint for site cleanup includes not only the details on every aspect of the construction work, but a description of the types of hazardous wastes expected at the

site, special plans for environmental protection, worker safety, regulatory compliance, and equipment decontamination.

Once the design is complete, how long does it take to actually clean up the site and how much does it cost?

The time and cost for performing the site cleanup — called the **remedial action** — are as varied as the remedies themselves. In a few cases, the only action needed may be to remove drums of hazardous waste and decontaminate them — an action that takes limited time and money. In most cases, however, a remedial action may involve different and expensive measures that can take a long time.

For example, cleaning polluted groundwater or dredging contaminated river bottoms can take several years of complex engineering work before contamination is reduced to safe levels. Sometimes the selected cleanup remedy described in the ROD may need to be modified because of new contaminant information discovered or difficulties that were faced during the early cleanup activities. Taking into account these differences, a remedial cleanup action takes an average of 18 months to complete and costs an average of $26 million per site.

Once the cleanup action is complete, is the site automatically "deleted" from the NPL?

No. The deletion of a site from the NPL is anything but automatic. For example, cleanup of contaminated groundwater may take up to 20 years or longer. Also, in some cases the **long-term monitoring** of the remedy is required to ensure that it is effective. After construction of certain remedies, operation and maintenance (e.g., maintenance of ground cover, groundwater monitoring, etc.) or continued pumping and treating of groundwater, may be required to ensure that the remedy continues to prevent future health hazards or environmental damage, and ultimately meets the cleanup goals specified in the ROD. Sites in this final monitoring or operational stage of the cleanup process are designated as "construction completed".

It's not until a site cleanup meets all the goals and monitoring requirements of the selected remedy that EPA can officially propose the site for "**deletion**" from the NPL. And it's not until public comments are taken into consideration that a site can actually be deleted from the NPL. Deletions that have occurred are included in the "Construction Complete" category in the progress report found later in this book.

Can EPA make parties responsible for the contamination pay?

Yes. Based on the belief that "the polluters should pay," after a site is placed on the NPL, the EPA makes a thorough effort to identify and find those responsible for causing contamination problems at a site. Although EPA is willing to negotiate with these private parties and encourages voluntary cleanup, it has the authority under the Superfund law to legally force those potentially responsible for site hazards to take specific cleanup actions. All work performed by these parties is closely guided and monitored by EPA, and must meet the same standards required for actions financed through the Superfund.

Because these enforcement actions can be lengthy, EPA may decide to use Superfund monies to make sure a site is cleaned up without unnecessary delay. For example, if a site presents an imminent threat to public health and the environment, or if conditions at a site may worsen, it could be necessary to start the cleanup right away. Those responsible for causing site contamination are liable under the law for repaying the money EPA spends in cleaning up the site.

Whenever possible, EPA and the Department of Justice use their legal enforcement authorities to require responsible parties to pay for site cleanups, thereby preserving the Superfund for emergency actions and sites where no responsible parties can be identified.

HOW TO:

USING THE STATE VOLUME

The Site Fact Sheets presented in this book are comprehensive summaries that cover a broad range of information. The fact sheets describe hazardous waste sites on the National Priorities List (NPL) and their locations, as well as the conditions leading to their listing ("Site Description"). They list the types of contaminants that have been discovered and related threats to public and ecological health ("Threats and Contaminants"). "Cleanup Approach" presents an overview of the cleanup activities completed, underway, or planned. The fact sheets conclude with a brief synopsis of how much progress has been made on protecting public health and the environment. The summaries also pinpoint other actions, such as legal efforts to involve polluters responsible for site contamination and community concerns.

The following two pages show a generic fact sheet and briefly describes the information under each section. The square "icons" or symbols accompanying the text allow the reader to see at a glance which environmental resources are affected and the status of cleanup activities.

Icons in the *Threats and Contaminants* Section

Contaminated **Groundwater** resources in the vicinity or underlying the site. (Groundwater is often used as a drinking water source.)

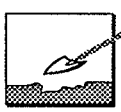
Contaminated **Surface Water and Sediments** on or near the site. (These include lakes, ponds, streams, and rivers.)

Contaminated **Air** in the vicinity of the site. (Pollution is usually periodic and involves contaminated dust particles or hazardous gas emissions.)

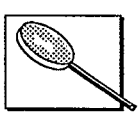
Contaminated **Soil and Sludges** on or near the site.

Threatened or contaminated **Environmentally Sensitive Areas** in the vicinity of the site. (Examples include wetlands and coastal areas, critical habitats.)

Icons in the *Response Action Status* Section



Initial Actions have been taken or are underway to eliminate immediate threats at the site.



Site Studies at the site are planned or underway.

Remedy Selected indicates that site investigations have been concluded and EPA has selected a final cleanup remedy for the site or part of the site.

Remedy Design means that engineers are preparing specifications and drawings for the selected cleanup technologies.

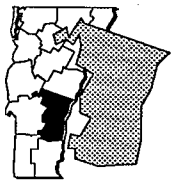
Cleanup Ongoing indicates that the selected cleanup remedies for the contaminated site — or part of the site — are currently underway.

Cleanup Complete shows that all cleanup goals have been achieved for the contaminated site or part of the site.

Site Responsibility

Identifies the Federal, State, and/or potentially responsible parties that are taking responsibility for cleanup actions at the site.

SITE NAME
STATE
EPA ID# ABC00000000



EPA REGION
CONGRESSIONAL DIST
County Name
Location

Aliases:

Site Description

Site Responsibility:

NPL LISTING HISTORY

Threats and Contaminants

Cleanup Approach

Response Action Status

Site Facts:

Environmental Progress

NPL Listing History

Dates when the site was Proposed, made Final, and Deleted from the NPL

Environmental Progress

A summary of the actions to reduce the threats to nearby residents and the surrounding environment; progress towards cleaning up the site and goals of the cleanup plan are given here.

WHAT THE FACT SHEETS CONTAIN

Site Description

This section describes the location and history of the site. It includes descriptions of the most recent activities and past actions at the site that have contributed to the contamination. Population estimates, land usages, and nearby resources give readers background on the local setting surrounding the site. Throughout the site description and other sections of the site summary, technical or unfamiliar terms that are *italicized* are presented in the glossary at the end of the book. Please refer to the glossary for more detailed explanation or definition of the terms.

Threats and Contaminants

The major chemical categories of site contamination are noted as well as which environmental resources are affected. Icons representing each of the affected resources (may include air, groundwater, surface water, soil and contamination to environmentally sensitive areas) are included in the margins of this section. Potential threats to residents and the surrounding environments arising from the site contamination are also described. Specific contaminants and contaminant groupings are italicized and explained in more detail in the glossary.

Cleanup Approach

This section contains a brief overview of how the site is being cleaned up.

Response Action Status

Specific actions that have been accomplished or will be undertaken to clean up the site are described here. Cleanup activities at NPL sites are divided into separate phases depending on the complexity and required actions at the site. Two major types of cleanup activities are often described: initial, immediate or emergency actions to quickly remove or reduce imminent threats to the community and surrounding areas; and long-term remedial phases directed at final cleanup at the site. Each stage of the cleanup strategy is presented in this section of the summary. Icons representing the stage of the cleanup process (initial actions, site investigations, EPA selection of the cleanup remedy, engineering design phase, cleanup activities underway and completed cleanup) are located in the margin next to each activity description.

Site Facts

Additional information on activities and events at the site are included in this section. Often details on legal or administrative actions taken by EPA to achieve site cleanup or other facts pertaining to community involvement with the site cleanup process are reported here.

How To

The fact sheets are arranged in alphabetical order by site name. Because site cleanup is a dynamic and gradual process, all site information is accurate as of the date shown on the bottom of each page. Progress is always being made at NPL sites, and EPA will periodically update the Site Fact Sheets to reflect recent actions and publish updated State volumes.

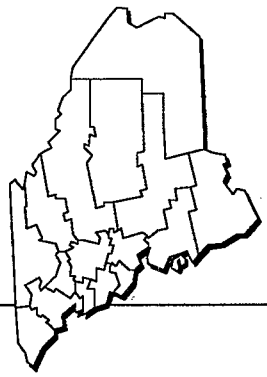
HOW CAN *YOU* USE THIS STATE BOOK?

You can use this book to keep informed about the sites that concern you, particularly ones close to home. EPA is committed to involving the public in the decisionmaking process associated with hazardous waste cleanup. The Agency solicits input from area residents in communities affected by Superfund sites. Citizens are likely to be affected not only by hazardous site conditions, but also by the remedies that combat them. Site cleanups take many forms and can affect communities in different ways. Local traffic may be rerouted, residents may be relocated, temporary water supplies may be necessary.

Definitive information on a site can help citizens sift through alternatives and make decisions. To make good choices, you must know what the threats are and how EPA intends to clean up the site. You must understand the cleanup alternatives being proposed for site cleanup and how residents may be affected by each one. You also need to have some idea of how your community intends to use the site in the future and to know what the community can realistically expect once the cleanup is complete.

EPA wants to develop cleanup methods that meet community needs, but the Agency can only take local concerns into account if it understands what they are. Information must travel both ways in order for cleanups to be effective and satisfactory. Please take this opportunity to learn more, become involved, and assure that hazardous waste cleanup at "your" site considers your community's concerns.

NPL Sites in State of Maine



Maine is the eastern most state, located in the northeastern corner of the mainland United States. The State covers 33,215 square miles consisting of the Appalachian Mountains extending through the state, rugged terrain along the western borders, long sand beaches on the southern coast, and rocky promontories, peninsulas and fjords on the northern coast. Maine experienced a 7.2 percent increase in population through the 1980s and currently has approximately 1,205,000 residents, ranking 38th in U.S. populations. Principal state industries include the manufacture of paper, wood and leather products, services, trade, finance, insurance, real estate, and construction. Maine natural resources also support industries in fishing, tourism, lumber, and non-fuel mineral production.

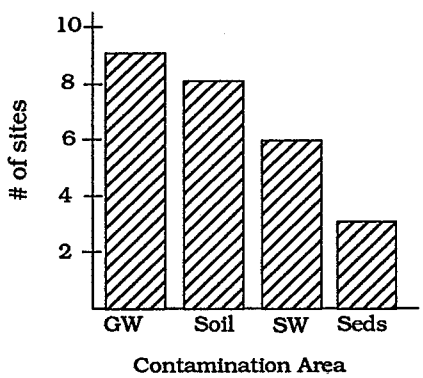
How Many Maine Sites Are on the NPL?

Proposed	2
Final	7
Deleted	0
	9

Where Are the NPL Sites Located?

Cong. District 01	7 sites
Cong. District 06	2 sites

How are Sites Contaminated and What are the Principal* Chemicals ?



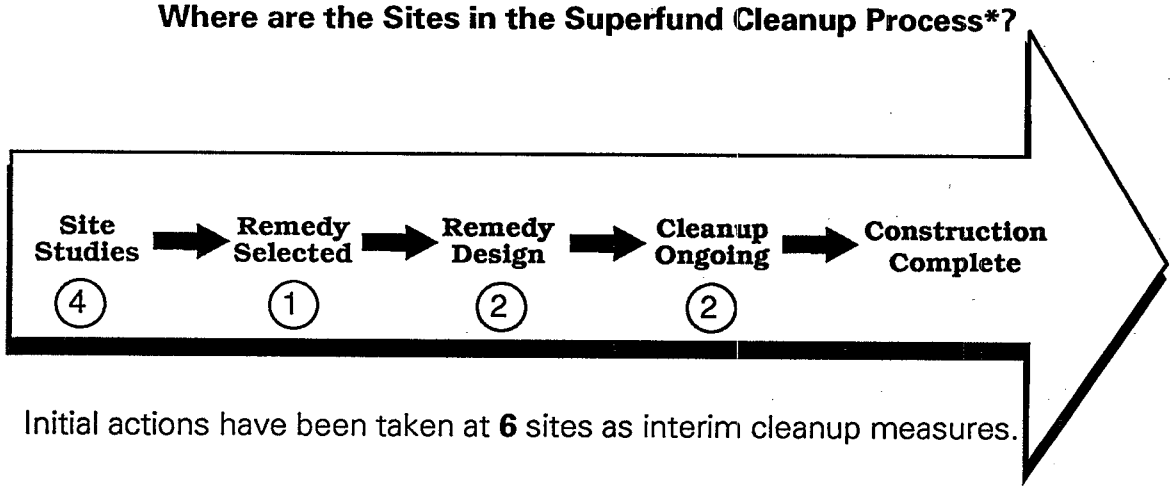
Groundwater: Volatile organic compounds (VOCs), heavy metals (inorganics) and polychlorinated biphenyls (PCBs).

Soil: Volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), heavy metals (inorganics), petrochemicals, and asbestos.

Surface Water and Sediments: Volatile organic compounds (VOCs) and heavy metals (inorganics).

*Appear at 20% or more sites

Where are the Sites in the Superfund Cleanup Process*?



Initial actions have been taken at **6** sites as interim cleanup measures.

Who Do I Call with Questions?

The following pages describe each NPL site in Maine, providing specific information on threats and contaminants, cleanup activities, and environmental progress. Should you have questions, please call one of the offices listed below:

Maine Superfund Office	(202) 289-2651
EPA Region I Superfund Office	(617) 573-9645
EPA Public Information	(202) 477-7751
EPA Superfund Hotline	(800) 424-9346
EPA Region I Superfund Public Relations Office	(617) 565-3417

The NPL Progress Report

The following Progress Report lists the State sites currently on or deleted from the NPL, and briefly summarizes the status of activities for each site at the time this report was prepared. The steps in the Superfund cleanup process are arrayed across the top of the chart, and each site's progress through these steps is represented by an arrow (➡) which indicates the current stage of cleanup at the site.

Large and complex sites are often organized into several cleanup stages. For example, separate cleanup efforts may be required to address the source of the contamination, hazardous substances in the groundwater, and surface water pollution, or to clean up different areas of a large site. In such cases, the chart portrays cleanup progress at the site's *most advanced stage,* reflecting the status of site activities rather than administrative accomplishments.

- ➡ An arrow in the "Initial Response" category indicates that an emergency cleanup or initial action has been completed or is currently underway. Emergency or initial actions are taken as an interim measure to provide immediete relief from exposure to hazardous site conditions or to stabilize a site to prevent further contamination.
- ➡ An arrow in the "Site Studies" category indicates that an investigation to determine the nature and extent of the contamination at the site is currently ongoing or planned to begin in 1991.
- ➡ An arrow in the "Remedy Selection" category means that the EPA has selected the final cleanup strategy for the site. At the few sites where the EPA has determined that initial response actions have eliminated site contamination, or that any remaining contamination will be naturally dispersed without further cleanup activities, a "No Action" remedy is selected. In these cases, the arrows in the Progress Report are discontinued at the "Remedy Selection" step and resume in the final "Construction Complete" category.
- ➡ An arrow at the "Remedial Design" stage indicates that engineers are currently designing the technical specifications for the selected cleanup remedies and technologies.
- ➡ An arrow marking the "Cleanup Ongoing" category means that final cleanup actions have been started at the site and are currently underway.
- ➡ A arrow in the "Construction Complete" category is used *only* when *all phases* of the site cleanup plan have been performed and the EPA has determined that no additional construction actions are required at the site. Some sites in this category may currently be undergoing long-term pumping and treating of groundwater, operation and maintenance or monitoring to ensure that the completed cleanup actions continue to protect human health and the environment.

The sites are listed in alphabetical order. Further information on the activities and progress at each site is given in the site "Fact Sheets" published in this volume.

Progress Toward Cleanup at NPL Sites in the State of Maine

Page	Site Name	County	NPL	Date	Initial Response	Site Studies	Remedy Selected	Remedy Design	Cleanup Ongoing	Construction Complete
1	BRUNSWICK NAVAL AIR STATION	CUMBERLAND	Final	07/02/87		➡				
3	LORING AIR FORCE BASE	AROOSTOOK	Final	02/21/90		➡				
5	MCKIN COMPANY	CUMBERLAND	Final	09/01/83	➡	➡	➡	➡	➡	
7	O'CONNOR COMPANY	KENNEBEC	Final	09/08/83	➡	➡	➡			
9	PINETTE'S SALVAGE YARD	AROOSTOOK	Final	09/01/83	➡	➡	➡	➡		
11	SACO MUNICIPAL LANDFILL	YORK	Final	02/15/90		➡				
13	SACO TANNERY WASTE PITS	YORK	Final	09/01/83	➡	➡	➡	➡		
15	UNION CHEMICAL COMPANY	KNOX	Final	10/04/89	➡	➡				
17	WINTHROP LANDFILL	KENNEBEC	Final	09/01/83	➡	➡	➡	➡	➡	

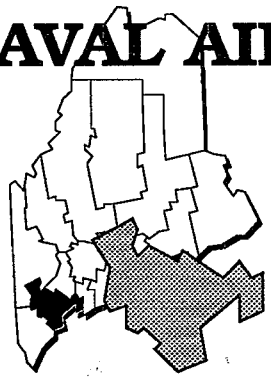
NPL:

Site Fact Sheets

BRUNSWICK NAVAL AIR STATION

MAINE

EPA ID# ME8170022018



REGION 1

CONGRESSIONAL DIST. 01

Cumberland County

At Rte 24 & 123 in Brunswick

Alias:
U.S. Navy NAS

Site Description

The Brunswick Naval Air Station is located between the towns of Brunswick and Bath. Of the 3,092-acre Naval Air Station, nine sites totalling at least 15 acres have been identified as being used in the past for disposal of hazardous wastes. Under the *Installation Restoration Program* (IRP), the EPA and the Department of the Navy have executed an *interagency agreement* that outlines site cleanup responsibilities between the two parties. Among the identified sites, three were used primarily for the *landfilling* of the station's household, office, and other wastes. Other sites were used for the disposal of various *acids*, caustics, solvents, and building materials, including asbestos. Three additional sites, including a fire training area, an ammunition dump, and the Defense Reutilization and Marketing Office (DRMO) facility have been added to the investigation. The various landfills at the site were used from 1945 to 1979. Pesticides, solvents, and waste oils present on the sites could potentially threaten a nearby public well field, private wells, surface water, and nearby *wetlands*. Approximately 3,000 people live on the base, within 1/2 mile of the sites, and nearly 18,000 people served by the groundwater are potentially threatened. The nearest residence is within 1,000 feet of the sites. The area surface water is used for recreation, irrigation, and commercial fishing.

Site Responsibility: The site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 10/01/84

Final Date: 07/02/87

Threats and Contaminants

The groundwater is contaminated with *volatile organic compounds* (VOCs) and heavy metals. Soils are contaminated with VOCs, semi-volatile organics and heavy metals. The on-site surface water is polluted with organics and metals. The off-site surface water tests positive for low levels of cadmium and mercury. Accidental ingestion or direct contact with groundwater, surface water, or soil could potentially pose health hazards to people. The area is restricted to the general public, but base personnel may come in contact with contamination. Harpswell Cove, a wetland adjacent to the site, is also subject to potential contamination.

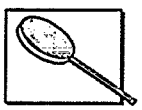
continued

Cleanup Approach

This site is being addressed in four *long-term remedial phases* corresponding to discrete areas of contamination. The Orion Street Landfills north and south and the Hazardous Waste Burial Area; the Acid/Caustic Pit and Old Acid Pit; the Asbestos Disposal and Rubble Areas; and the Perimeter Road Landfill and Neptune Drive Disposal Site are the four units.

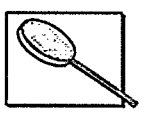
Response Action Status

Orion Street Landfills north and south and Hazardous Waste Burial Area: With assistance from the EPA, these sites currently are undergoing the investigative process to evaluate the extent and nature of contamination. These studies will be used to help formulate recommended cleanup technologies. The Navy will take the lead on cleanup. Engineering design and cleanup activities for all areas will begin by 1992.



Acid/Caustic Pit, Old Acid Pit: A study for the Acid/Caustic Pit and Old Acid Pit disposal areas is currently under way to formulate recommended cleanup technologies.

Asbestos Disposal Site and Rubble Areas: Investigations are planned to determine the extent of asbestos contamination and to pinpoint cleanup approaches at the Asbestos and Rubble Disposal areas.



Perimeter Road Landfill and Neptune Drive Disposal Site: A study for these sites is currently under way to formulate recommended cleanup technologies.

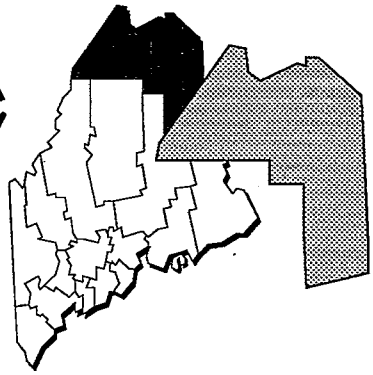
Environmental Progress

After adding this site to the NPL, the EPA assessed conditions at Brunswick Naval Air Station and determined that no immediate actions are necessary to protect the public health or the environment. The site is safe while awaiting for cleanup actions to begin.

LORING AIR FORCE BASE

MAINE

EPA ID# ME9570024522



REGION 1

CONGRESSIONAL DIST. 02

Aroostook County
Northeastern Maine

Aliases:
Fire Training Area
US Air Force Loring AFB
Flightline Area

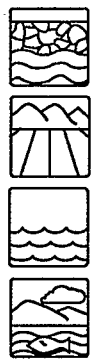
Site Description

The 9,000-acre Loring Air Force Base has operated as an active military installation since 1952. An estimated 1,200 people obtain drinking water from wells within 3 miles of hazardous substances on the base; the nearest well is less than 500 feet from where transformers were buried. Hazardous wastes generated on the base include waste oils, fuels cleaned from aircraft and vehicles, spent solvents (many of them chlorinated organic chemicals), *polychlorinated biphenyls* (PCBs), and pesticides. Historically, wastes have been burned or buried in *landfills*. There are on-site landfills, some of which are old gravel pits. Landfills #2 and #3 were used for disposal of hazardous wastes from 1956 to the early 1980s. In the Fire Department Training Area, large quantities of hazardous materials were landfilled until 1968 and burned until 1974. The 600-acre Flightline Area, with its industrial shops and maintenance hangars, was a primary generator of hazardous waste on the base; most wastes were disposed of off site, although some probably were disposed of on the ground, on concrete, or in the storm and sewer drains. The site is located in a rural area. The population on the Air Force base within 1 mile of the site is 8,500. A 2,500-foot channelized portion of a tributary to Greenlaw Creek receives storm water discharges from several sewers draining the Flightline Area and the Nose Dock Area, where fuels were handled. Surface water within 3 miles downstream of the site is used for recreational activities.

Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY
Proposed Date: 07/14/89
Final Date: 02/21/90

Threats and Contaminants



Tests of monitoring wells indicate that the groundwater on the base is contaminated with *volatile organic compounds* (VOCs) such as methylene chloride, *trichloroethylene* (TCE), and carbon tetrachloride and heavy metals including barium. Soils in the Flightline Area contain significant amounts of fuel, oil, and various VOCs. Surface water in the Flightline Drainage Ditch is contaminated with VOCs and heavy metals such as iron. People on the base are potentially threatened by direct contact with hazardous substances at the landfills and burn pit because the pit is inadequately fenced. Other potential threats to the public include accidental ingestion and contact with contaminated soils and water. A freshwater *wetland* is threatened by contamination.

Cleanup Approach

The site is being addressed in four *long-term remedial phases* focusing on cleanup of the landfills, fire training area, flightline, and the remainder of the site.

Response Action Status

Landfills: The Air Force will be conducting an investigation of the contamination associated with Landfills 1, 2, and 3 in 1990. The investigation will define the contaminants and will recommend alternatives for the final cleanup.

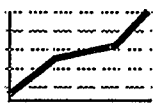
Fire Training Area: An additional investigation into the contamination of the fire training area is planned for 1990. The investigation will define the contaminants and will recommend alternatives for the final cleanup of the area.

Flightline: An investigation into the contamination in the flight line, nose dock, and drain ditch areas is scheduled to begin in 1990. The investigation will determine the various contaminants and will recommend alternatives for cleaning up these sites.

Remainder of the Site: An investigation into the contamination at 10 additional areas within the site is planned for 1991. At the conclusion of these studies, the EPA will recommend the best remedies for the final cleanup of the sites.

Site Facts: *Interagency agreement* negotiations are slated to begin in 1990 between the EPA, the Air Force, and the State of Maine. This site is being addressed under the *Installation Restoration Program* (IRP), which seeks to identify, investigate, and control hazardous wastes on military or DOD installations.

Environmental Progress

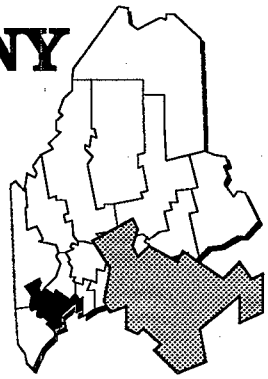


Following listing of this site on the NPL, the EPA has completed a site assessment and determined that it presently poses no immediate threat to public health or the environment. Loring Air Force Base is safe while it awaits results of the investigations and final cleanup actions.

MCKIN COMPANY

MAINE

EPA ID# MED980524078



REGION 1
CONGRESSIONAL DIST. 01
Cumberland County
Mayall Road, 1 mile east of the Town of Gray

Site Description

The McKin Company operated a waste collection, transfer, and disposal facility on a portion of this 7-acre site between 1965 and 1978. The facility is located in a rural residential area about 1 mile east of the center of Gray. The site was formerly operated as a sand and gravel pit that had been excavated to depths of 6 to 20 feet below the land surface. The operation was constructed for waste generated when a Norwegian tanker ran aground on a ledge in Hussey Sound, spilling 100,000 gallons of industrial fuel. In addition, the plant handled and disposed of a mixture of solvents, oils, and other chemicals. Approximately 100,000 to 200,000 gallons of waste are thought to have been processed annually. Operating facilities included an incinerator, a concrete block building, an asphalt-lined *lagoon*, and storage and fuel tanks. Wastes may also have been disposed by spreading them over the ground surface. As early as 1973, residents of East Gray reported odors in well water and discoloration of laundry. In 1977, the EPA confirmed that contaminated groundwater had reached many of the local private wells. These water supplies were *capped*, and the Farmers Home Administration trucked in water supplies. The public water system was extended to the affected area in 1978, and all residents were connected to it. In 1988, the EPA and the State finalized an agreement with over 320 *potentially responsible parties* to carry out a cleanup plan. Approximately 300 people live within a 1/2-mile radius of the site. The nearest residence is 300 feet northeast of the property.

Site Responsibility: The site is being addressed through a combination of Federal, State, and potentially responsible parties' actions.

NPL LISTING HISTORY
Proposed Date: 12/01/82
Final Date: 09/01/83

Threats and Contaminants

The groundwater is contaminated with *volatile organic compounds* (VOCs) including trichloroethane and *trichloroethylene* (TCE). The soil is contaminated with VOCs, *petrochemicals*, and heavy metals including arsenic, lead, and mercury. Off-site surface water and groundwater are also contaminated with VOCs. There is no known current exposure of residents to the groundwater, since all residents are connected to the public water supply. Potential threats exist from contaminated groundwater discharges to the surface springs (Boiling Springs) located nearby.

Cleanup Approach

The site is being addressed in three stages: initial actions to control site contamination, and two *long-term remedial phases* focusing on soil cleanup and groundwater treatment.

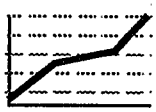
Response Action Status

Initial Actions: In 1979, the State removed 33,500 gallons of wastes and 165 drums of oils and chemicals. From 1985 to 1987, the parties potentially responsible for the site contamination removed 55-gallon drums from the site. A fence surrounding the process area facilities was repaired, and a similar fence was installed across the front of the facility to prevent unauthorized access. Monitoring wells were also installed. Other actions included cleaning of the tanks, transportation of the empty tanks off site for salvage, and transportation of liquids and *sludges* off site for disposal. The State cleaned and removed all of the remaining aboveground tanks in 1985.

Soil: The remedies selected by the EPA for soil contamination included *aeration* of the soil and disposal off site of 16 drums. All of the selected cleanup remedies were performed by the parties potentially responsible and were completed in 1987. Enclosed thermal soil aeration reduced contaminant levels in 12,000 cubic yards of soils to safe levels.

Groundwater: The remedies selected by the EPA and to be performed by the parties potentially responsible for the cleanup of the groundwater include: (1) installing a groundwater extraction, treatment, and discharge system; (2) groundwater and surface water monitoring programs to evaluate the effectiveness of the contamination source control and off-site groundwater programs; and (3) closing down the site by demolishing buildings, clearing debris, draining and filling in the lagoon, removing drums and other contaminated materials, fencing the site, and covering the site with soil and vegetation. The parties potentially responsible for the site contamination are preparing the technical specifications and design for the selected groundwater cleanup activities. The cleanup will commence once the design phase is completed in 1990. Groundwater and surface water monitoring will continue for 10 years after treatment is complete. The responsible parties are conducting additional studies of an area east of the lagoon where groundwater contamination has been discovered, to determine the nature of contamination and whether a special cleanup effort is needed in this area as well.

Environmental Progress

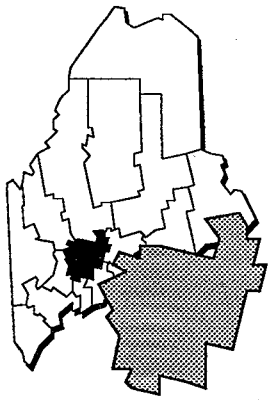


Many cleanup actions have been completed and others are under way. The health risks and environmental threat posed by these hazardous materials are being eliminated as the work progresses. Upon final completion, the soil and groundwater contamination levels will be reduced to meet established health and ecological standards for the site.

O'CONNOR COMPANY

MAINE

EPA ID# MED980731475



REGION 1

CONGRESSIONAL DIST. 01

Kennebec County

Along U.S. Route 17 near Augusta

Site Description

The O'Connor Company site occupies approximately 9 acres within a 65-acre area. The site includes a large barn that formerly housed scrap operations, an upland marsh, two *lagoons*, three former transformer work areas, and a former scrap area where the company stored and discarded rubbish. The site is bordered by private properties and residences, woodlands, a small poultry farm, the west branch of Riggs Brook, and its associated *wetlands*. In the 1950s, the company began operating a salvage and electrical transformer recycling business at the site. Operations included *stripping* and recycling transformers containing *polychlorinated biphenyls* (PCBs)-laden oil. In 1972, an oil spill at the site was found to have *migrated* towards Riggs Brook. Later that year, at the request of the State, the company began containing all transformer fluids found on the site in an aboveground storage tank to prevent future spills. When high levels of PCBs were found in the soils during sampling by the State in 1976, the company was instructed to construct two lagoons to control further migration of oils from the site. The upper lagoon, constructed with a concrete retaining wall and a discharge system, and a lower lagoon, constructed with a horizontal pipe discharge system and an earthen *berm* were installed. To reclaim the lagoon areas, the company pumped water from the lagoons into several on-site storage tanks and excavated the lagoon *sediments*. These sediments were in turn deposited into a low area and were covered by approximately 1 foot of clay soil. This created a barrier for natural surface water drainage from the site to Riggs Brook and resulted in the formation of a marsh behind the on-site barn. Approximately 50 people live within a 1/4-mile radius of the site. The distance from the site to the nearest residence is less than 100 feet.

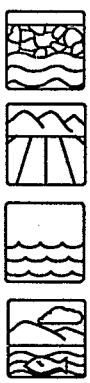
Site Responsibility: This site is being addressed through Federal and *potentially responsible parties'* actions.

NPL LISTING HISTORY

Proposed Date: 12/30/82

Final Date: 09/08/83

Threats and Contaminants

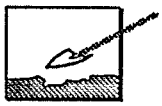


The groundwater on site is contaminated with PCBs and dichlorobenzene. The soil on site is contaminated with PCBs, lead and various carcinogenic *polycyclic aromatic hydrocarbons* (PAHs). Standing surface water on the site has been shown to be contaminated with PCBs, aluminum, and lead. People who trespass on the site would be threatened by coming in direct contact with or accidentally ingesting contaminants in soils, sediments, groundwater, or surface water. In addition, eating fish, waterfowl, livestock, or plants that may have become contaminated would pose a threat to people. The site is currently surrounded by a chainlink fence and posted with appropriate warning signs.

Cleanup Approach

The site is being addressed in two stages: immediate actions to limit the spread of contamination and a *long-term remedial phase* focusing on cleanup of the entire site.

Response Action Status

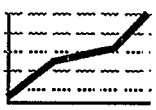


Immediate Actions: The O'Connor Company constructed a fence around the property and posted warning signs along approximately 5 acres of the site in 1984. The owner also sampled and analyzed the contents of all drums and storage tanks on the site and then removed them. In 1987, Central Maine Power extended the fence to areas where additional contamination was found and removed additional contaminated material from the site.

Entire Site: The remedies selected by the EPA to be performed by the parties potentially responsible for the site contamination include: (1) pumping 150,000 to 195,000 gallons of surface water from the upper and lower lagoons and marsh and removing it to an EPA-approved off-site treatment facility; and (2) treating 23,500 cubic yards of contaminated soils and sediments using solvents to extract contaminants. The contaminated liquid from this process will be incinerated off site. The residues that contain high levels of lead will be treated by solidifying the material and removing it. The site will be restored by *backfilling*, and the potentially responsible parties will establish wetlands to replace those lost. Groundwater will be collected, filtered, and treated to contain or remove the contaminants. The potentially responsible parties will prepare the technical specifications and design for the cleanup. The cleanup activities will commence once the design phase is completed in 1991.

Site Facts: In 1984, the EPA issued an *Administrative Order* to the O'Connor Company requiring them to construct a fence and post warning signs and analyze the contents of all drums and storage tanks found on the site. In 1986, the EPA issued an Administrative Order to the company and Central Maine Power to conduct an investigation into the type and extent of contamination at the site and to identify alternatives for site cleanup. In 1986, the State also issued Orders to the potentially responsible parties requiring the removal of the hazardous substances present in tanks and containers at the site. In 1987, the EPA and the State issued a joint Administrative Order to the O'Connor Co. and Central Maine Power to investigate the nature and extent of contamination and to identify alternatives for cleanup, and also to extend the existing 5-acre fence to cover an additional 4 acres.

Environmental Progress

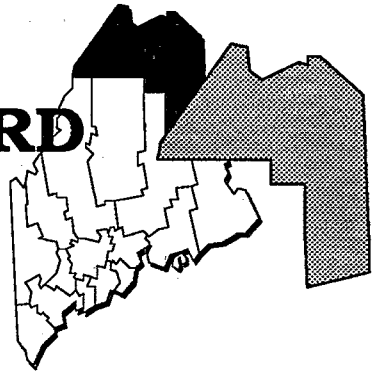


The construction of a fence which limits access to the contaminated areas of the site and the removal of drums and storage tanks have reduced the exposure potential at the O'Connor Company location. The implementation of the cleanup remedies selected by the EPA will further reduce site contamination, making the site safer as cleanup actions progress.

PINETTE'S SALVAGE YARD

MAINE

EPA ID# MED980732291



REGION 1

CONGRESSIONAL DIST. 02

Aroostook County

1 mile southwest of Washburn

Site Description

Pinette's Salvage Yard covers 12 acres and consists of a vehicle repair and salvage yard. In 1979, three electrical transformers were removed from Loring Air Force Base by a private electrical contractor and brought to the site, where they ruptured while being moved from the delivery vehicle. Approximately 900 to 1,000 gallons of dielectrical fluids containing *polychlorinated biphenyls* (PCBs) spilled directly onto the ground. The oil *migrated* through the soil and may have contaminated groundwater and surface water. Land surrounding the yard is used for residential, general industrial, and agricultural purposes. The nearest population center is located approximately 1 mile northeast of the site. There are 15 people living within a 1/2-mile radius of the site. The distance to the nearest residence is about 250 feet from the spill area. An undeveloped forest and *wetlands* area is also adjacent to the site. The Aroostook River, a major waterway in Northern Maine, is located approximately 1,500 feet from the site. The water supply for the eight to ten residences located within a 1/2-mile radius is obtained from private wells located in the deep bedrock *aquifer* below the site. Municipal wells, used to supply the drinking water to local residents, are located 1 mile from the site.

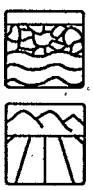
Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY

Proposed Date: 12/01/82

Final Date: 09/01/83

Threats and Contaminants

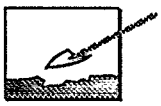


The on-site groundwater and soil are contaminated with PCBs and *volatile organic compounds* (VOCs) including benzene and chloromethane. People who come in direct contact with the soil may be exposed to contaminants by accidental ingestion and skin absorption. Inhalation of contaminated dusts released from the site is also a threat. A potential human health threat exists for use of groundwater under future land use conditions. Current use of groundwater, however, does not pose a threat because the wells are located *upgradient* of the site.

Cleanup Approach

The site is being addressed in two stages: an emergency action and a *long-term remedial phase* focusing on the entire site.

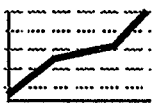
Response Action Status



Emergency Action: In 1983, the EPA excavated 800 cubic yards of PCB-contaminated soil and transported it to an approved disposal facility.

Entire Site: The remedy selected by the EPA to clean up the site includes the following: (1) off-site incineration of 300 cubic yards of PCB-contaminated soil; (2) on-site solvent extraction of an additional 1,700 to 1,900 cubic yards of contaminated soil; (3) installation of a groundwater collection system, and (4) treatment of the groundwater by first pumping it through a granular filter to remove the contaminants, followed by *carbon adsorption* to remove the organic contaminants. The EPA is preparing the technical specifications and design for the cleanup of the site. Cleanup activities are scheduled to start once the design phase is completed in 1990.

Environmental Progress

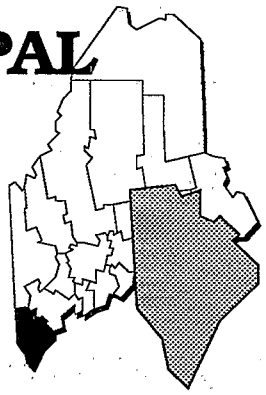


Removal of PCB contaminated soil has greatly reduced the potential of exposure to hazardous substances at the site, making the Pinette's Salvage area safer while it awaits further cleanup activities.

SACO MUNICIPAL LANDFILL

MAINE

EPA ID# MED980504393



REGION 1
CONGRESSIONAL DIST. 01
York County
Foss Road

Site Description

The Saco Municipal Landfill covers approximately 90 acres and has been owned and operated by the City of Saco since 1960. The site consists of four distinct disposal areas. Area 1 is a closed and *capped* municipal dump that was used for open burning of household and industrial waste; Area 2 is an inactive industrial dump that accepted bulk and demolition debris; Area 3 is a relatively small area of about 1 acre in which wastes such as tires and leather and rubber scraps from local industries were dumped. This uncovered area is located on the outside of the service road that circles Area 4. Area 4 is a recently closed *landfill* that accepted household waste and tannery *sludge* containing chromium and other heavy metals, as well as *volatile organic compounds* (VOCs). The sludge was placed in unlined trenches, often directly in contact with groundwater. Area 2 has a *leachate* collection system, but there is no evidence of liners or leachate systems in other disposal areas. The population within a 3-mile radius is 32,000. Approximately 130 people live within 1 mile from the site. Water and *sediment* in Sandy Brook, which flows through the site, and groundwater beneath the site have been shown to contain elevated levels of various metals and organics. Approximately 700 people obtain drinking water from wells within 3 miles of the landfill. In 1975, the Biddeford and Saco Water Company extended water lines along Jenkins Road and Route 112.

Site Responsibility: The site is being addressed through Federal and *potentially responsible parties'* actions.

NPL LISTING HISTORY
Proposed Date: 02/15/88
Final Date: 02/15/90

Threats and Contaminants

Wastes produced by local industries may be the source of contaminants in the groundwater, surface water, and sediments in the Saco Landfill site. Industries in the area produce leather goods, plastics, vinyl stripping, machine parts, textiles, foam products, and finishes. Typical wastes from these industries include heavy metals, chromium, solvents, dyes, polymers, and phthalates. The groundwater contains elevated levels of heavy metals including iron, manganese, and toluene. Sandy Brook has been shown to be contaminated with elevated levels of heavy metals and VOCs. The site is only partially fenced, making it possible for people and animals to come into direct contact with hazardous substances. People who accidentally touch, eat, or drink contaminated groundwater, surface water, or sediments may be at risk. Surface waters in Sandy Brook also can transport contamination off site.

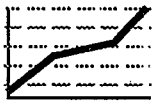
Cleanup Approach

The site is being addressed in a single *long-term remedial phase* focusing on cleanup alternatives for the entire site.

Response Action Status

Entire Site: The parties potentially responsible for contamination at the site will conduct an investigation into the nature and extent of the contamination. The investigation will also recommend alternatives for the final cleanup. The investigation is planned to start in 1991.

Environmental Progress

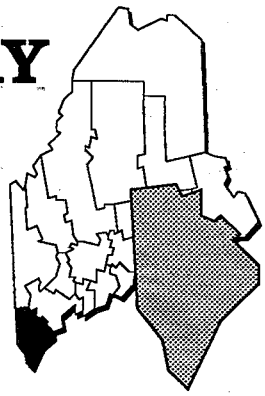


The EPA assessed conditions at the Saco Municipal Landfill and determined that the actions currently being taken are sufficient to ensure that immediate threat to human health or the environment is not a concern. Some intermediate actions may be deemed necessary while awaiting the results of the investigation for the final cleanup alternatives.

SACO TANNERY WASTE PITS

MAINE

EPA ID# MED980520241



REGION 1
CONGRESSIONAL DIST. 01
York County
Saco

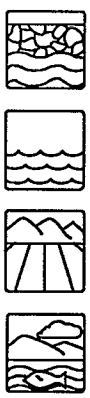
Site Description

The Saco Tannery Waste Pits site covers 233 acres and was operated from 1959 until 1981, when the Saco Tannery Corporation filed for bankruptcy and stopped site operations. The site was used as a disposal area for process wastes such as chromium *sludges*, *acid* wastes, methylene chloride, and caustic substances. More than 23 million gallons of wastes were deposited in two *lagoons* and numerous disposal pits. Several types of wastes were deposited in Chromium Lagoon 1 until 1968. Waste streams were separated, and Chromium Lagoon 2 was constructed in 1969 only for chromium and solid wastes. Smaller pits were constructed for acid wastes from the grease-rendering fleshing process and for caustic wastes from the patent leather process. The site is bordered by the Maine Turnpike, Flag Pond Road, residential property on Hearn Road, and the Scarborough town line. Access to the site is controlled by a fence along the Maine Turnpike and Flag Pond Road, with a locking gate at the entrance on Flag Pond Road. Groundwater is the source of drinking water for residents located south and west of the site. Approximately 20 residences are located within 1,000 feet of the site and 2,600 people live within a 3-mile radius of the site. Because the area is heavily wooded and is inhabited by a variety of wildlife, it is frequently used by hunters. The site is also used by snowmobilers in the winter.

Site Responsibility: This site is being addressed through Federal actions.

NPL LISTING HISTORY
Proposed Date: 12/01/82
Final Date: 09/01/83

Threats and Contaminants



Groundwater is contaminated with heavy metals including arsenic and lead. *Sediments* are contaminated with antimony and heavy metals. The soil is contaminated with antimony, *volatile organic compounds* (VOCs), and heavy metals. Trespassers who accidentally touch, eat, or drink contaminated groundwater, soil, or sediment would be at risk. The surrounding fauna are at risk from the contamination, as well as the *wetlands*, which cover approximately 6 acres near the site.

Cleanup Approach

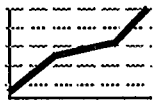
This site is being addressed in two stages: an immediate action and a *long-term remedial phase* focusing on cleanup of the entire site.

Response Action Status

Immediate Action: In 1983, the EPA removed corrosive liquid from three acid pits and disposed of it at an approved facility. The EPA also neutralized the remaining sludge in the three pits with lime, covered them with *caps*, and erected a fence around portions of the site property.

Entire Site: The EPA and the State of Maine conducted studies into the contamination at the site. The preferred remedy for site cleanup includes: (1) covering waste in disposal pits and lagoons with geotextile fabrics and 4 to 6 feet of soil; (2) monitoring the groundwater to detect any continued contamination; and (3) designating the area as a permanent conservation zone to be protected by the State of Maine. Treatment alternatives for the waste materials will be used should contamination continue to affect groundwater. If adequate institutional controls for the selected remedy described above are not in effect by 1991, an alternate remedy, which includes the construction of a federally approved *landfill* on site, will be implemented.

Environmental Progress

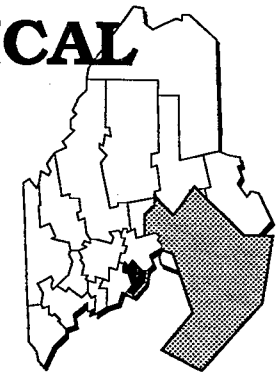


The removal of liquid wastes, the neutralization of sludges, and the capping of the pits have greatly reduced the potential of exposure to hazardous substances surrounding the acid pit areas, and protected the public health and the environment. The Saco Tannery site safer while further cleanup activities progress.

UNION CHEMICAL COMPANY

MAINE

EPA ID# MED042143883



REGION 1

CONGRESSIONAL DIST. 01

Knox County

Along the south side of

Route 17, west of South Hope

Site Description

The Union Chemical Company site is located on approximately 12 acres and began operations in 1967 as a formulator of paint and coating strippers. In 1969, the company expanded its operation and began handling and recovering *petrochemical*-based solvents. In 1979, as part of the recovery process, the company added a fluidized bed incinerator to burn contaminated *sludges* and other undetermined hazardous wastes. These types of waste may also have been burned in an on-site boiler that provided heat and operating power to the facility. Between 1979 and 1984, the plant was cited by the State for deficiencies or violations of several operating licenses. The State closed the waste treatment operations in 1984, at which time approximately 2,000 drums and 30 liquid storage tanks containing hazardous waste were stored on the site. The on-site soil and groundwater contamination appear to be the result of improper handling and operating practices such as leaking stored drums, spills, use of a septic tank and a *leachfield* for disposal of process wastewater, and could also be attributed to past disposal methods. There are approximately 200 people living within a 1/2-mile radius of the site. These residents depend on groundwater for domestic use. The site is bounded by Quiggle Brook and is in the 100-year floodplain. Grassy Pond is less than 1 mile *upgradient* of the site and is an alternate drinking water source serving approximately 22,800 people in the towns of Camden, Rockport, Rockland, and Thomaston.

Site Responsibility: The site is being addressed through Federal and *potentially responsible parties'* actions.

NPL LISTING HISTORY

Proposed Date: 04/01/85

Final Date: 10/04/89

Threats and Contaminants

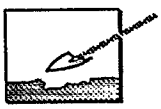
Buildings and other plant facilities contain heavy metals, dioxins, and asbestos. Approximately 2 1/2 acres of the site is fenced and contains the former processing buildings, two aboveground storage tanks, a former drum storage area, and incinerator facilities. The on-site groundwater and soils are contaminated with *volatile organic compounds* (VOCs) including toluene, xylenes and others. Off-site surface water contamination has occurred through discharges of contaminated process wastewater into the adjacent Quiggle Brook and possibly through natural discharge of contaminated groundwater into the brook. People who accidentally touch, eat, or drink contaminated groundwater, surface water, or soil at the site could be at risk.

continued

Cleanup Approach

The site is being addressed in two stages: immediate actions to limit the spread of contaminants and a *long-term remedial phase* focusing on cleanup of the entire site.

Response Action Status

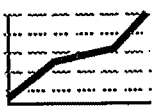


Immediate Actions: In 1984, the EPA removed all surface drums, over 100,000 gallons of liquid wastes and sludges from aboveground storage tanks, and some contaminated soil from the site.

Entire Site: The parties potentially responsible for site contamination are currently conducting an investigation into the nature and extent of the contamination at the site. The investigation will define the contaminants of concern and will recommend alternatives for the final cleanup. The investigation is planned to be completed in 1990.

Site Facts: In 1987 and 1988, the EPA, the State, and 288 parties potentially responsible for contamination at the site entered into two *Administrative Orders*. In these orders, the parties agreed to conduct an investigation to examine the possible cleanup alternatives and have reimbursed the EPA and the State for approximately 80% of its past cleanup costs. In 1989, the EPA entered into a *Consent Decree* with nine additional potentially responsible parties where the parties agreed to reimburse the EPA for additional incurred costs.

Environmental Progress

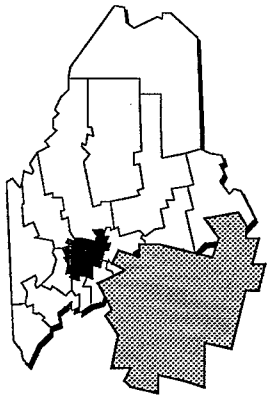


The removal of contaminated drums, tanks, and soil have reduced the potential for exposure to contamination at the Union Chemical Co. site while it awaits results of the planned investigation and the recommended cleanup alternatives.

WINTHROP LANDFILL

MAINE

EPA ID# MED980504435



REGION 1

CONGRESSIONAL DIST. 01

Kennebec County

Winthrop

Site Description

The Winthrop Landfill is a 13-acre site located along the western shore of Lake Annabessacook and consists of two adjacent properties: the Winthrop Town Landfill and the privately owned Savage Landfill. The site was initially used in the 1920s as a sand and gravel pit. In the 1930s, parts of the site received municipal, commercial, and industrial wastes. The site accepted hazardous substances between the early 1950s and mid-1970s. It is estimated that over 3 million gallons of chemical wastes, mostly complex organic compounds, including resins, plasticizers, solvents, and other process chemicals were disposed of at the site. Late in 1979, the town attempted to expand the *landfill*, but this revealed numerous rusting and leaking barrels. The town decided to close the landfill and construct a transfer station on the site. The Savage Landfill contracted to accept municipal solid waste and debris from two small neighboring towns and also accepted wastes from Winthrop to extend the life of the town landfill. Wastes were openly burned until 1972, and landfilling occurred from 1972 until 1982. There are 63 residences within 1/2 mile of the site. *Wetlands* are located near the site and Lake Annabessacook is used for recreational purposes.

Site Responsibility: The site is being addressed through Federal and *potentially responsible parties'* actions.

NPL LISTING HISTORY

Proposed Date: 10/01/81

Final Date: 09/01/83

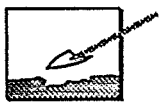
Threats and Contaminants

Volatile organic compounds (VOCs) from the landfill were found to be *migrating* off site in the groundwater. The soil has been contaminated from drums containing inorganic and organic chemicals and municipal wastes. Potential risks exist if contaminated soil or groundwater is accidentally ingested. The area is fenced to protect against direct contact with contamination.

Cleanup Approach

The site is being addressed in three stages: immediate actions and two *long-term remedial phases* focusing on cleanup of the entire site and groundwater treatment.

Response Action Status



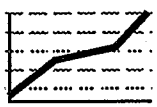
Immediate Actions: The potentially responsible parties and the Town of Winthrop have extended the town water supply to residents previously on well water drawing from an contaminated *aquifer* below the landfill.

Entire Site: An impermeable clay cover has been constructed over the landfill to contain the landfilled wastes, thereby reducing the quantity of contaminated *leachate* entering the groundwater. A fence has been placed around the landfill to protect against direct contact with the site, and deed restrictions have been imposed prohibiting use of the landfill for activities other than the *remedial* action and prohibiting excavation in the area of the landfill.

Groundwater Treatment: Engineering design work consisting of geologic, *hydrogeologic*, and treatment alternatives studies will be conducted by the parties potentially responsible. The studies will provide data for the design of a suitable treatment system. The parties potentially responsible for the contamination will install an extraction system to treat and eliminate groundwater contamination, should it be necessary.

Site Facts: A *Consent Decree* ordering the above actions was signed by the EPA and the potentially responsible parties and filed with the U.S. District Court in 1986.

Environmental Progress



The provision of an alternative water supply to affected residences in the area of the Winthrop Landfill and the installation of a fence to restrict site access have reduced the potential of exposure to hazardous materials at the site while it awaits further cleanup activities.

GLOSSARY:

TERMS USED IN THE FACT SHEETS

This glossary defines the italicized terms used in the site fact sheets for the State of Maine. The terms and abbreviations contained in this glossary are often defined in the context of hazardous waste management as described in the site fact sheets, and apply specifically to work performed under the Superfund program. Therefore, these terms may have other meanings when used in a different context.

Acids: Substances, characterized by low pH (less than 7.0) that are used in chemical manufacturing. Acids in high concentration can be very corrosive and react with many inorganic and organic substances. These reactions may possibly create toxic compounds or release heavy metal contaminants that remain in the environment long after the acid is neutralized.

Administrative Order On Consent: A legal and enforceable agreement between EPA and the parties potentially responsible for site contamination. Under the terms of the Order, the potentially responsible parties agree to perform or pay for site studies or cleanups. It also describes the oversight rules, responsibilities and enforcement options that the government may exercise in the event of non-compliance by potentially responsible parties. This Order is signed by PRPs and the government; it does not require approval by a judge.

Administrative Order [Unilateral]: A legally binding document issued by EPA directing the parties potentially responsible to perform site cleanups or studies (generally, EPA does not issue unilateral orders for site studies).

Aeration: A process that promotes breakdown of contaminants in soil or water by exposing them to air.

Air Stripping: A process whereby volatile organic chemicals (VOCs) are removed from contaminated material by forcing a stream of air through it in a pressurized vessel. The contaminants are evaporated into the air stream. The air may be further treated before it is released into the atmosphere.

Aquifer: An underground layer of rock, sand, or gravel capable of storing water within cracks and pore spaces, or between grains. When water contained within an aquifer is of sufficient quantity and quality, it can be tapped and used for drinking or other purposes. The water contained in the aquifer is called groundwater.

GLOSSARY

Backfill: To refill an excavated area with removed earth; or the material itself that is used to refill an excavated area.

Berm: A ledge, wall, or a mound of earth used to prevent the migration of contaminants.

Cap: A layer of material, such as clay or a synthetic material, used to prevent rainwater from penetrating and spreading contaminated materials. The surface of the cap is generally mounded or sloped so water will drain off.

Carbon Adsorption: A treatment system in which contaminants are removed from groundwater and surface water by forcing water through tanks containing activated carbon, a specially treated material that attracts and holds or retains contaminants.

Consent Decree: A legal document, approved and issued by a judge, formalizing an agreement between EPA and the parties potentially responsible for site contamination. The decree describes cleanup actions that the potentially responsible parties are required to perform and/or the costs incurred by the government that the parties will reimburse, as well as the roles, responsibilities, and enforcement options that the government may exercise in the event of non-compliance by potentially responsible parties. If a settlement between EPA and a potentially responsible party includes cleanup actions, it must be in the form of a consent decree. A consent decree is subject to a public comment period.

Hydrogeology: The geology of groundwater, with particular emphasis on the chemistry and movement of water.

Installation Restoration Program: The specially funded program established in 1978 under which the Department of Defense has been identifying and evaluating its hazardous waste sites and controlling the migration of hazardous contaminants from those sites.

Interagency Agreement: A written agreement between EPA and a Federal agency that has the lead for site cleanup activities (e.g. the Department of Defense), that sets forth the roles and responsibilities of the agencies for performing and overseeing the activities. States are often parties to interagency agreements.

Lagoon: A shallow pond where sunlight, bacterial action, and oxygen work to purify wastewater. Lagoons are typically used for the storage of wastewaters, sludges, liquid wastes, or spent nuclear fuel.

Landfill: A disposal facility where waste is placed in or on land.

Leachate [n]: The liquid that trickles through or drains from waste, carrying soluble components from the waste. **Leach, Leaching [v.t.]:** The process by which soluble chemical components are dissolved and carried through soil by water or some other percolating liquid.

Long-term Remedial Phase: Distinct, often incremental, steps that are taken to solve site pollution problems. Depending on the complexity, site cleanup activities can be separated into a number of these phases.

Migration: The movement of oil, gas, contaminants, water, or other liquids through porous and permeable rock.

Petrochemicals: Chemical substances produced from petroleum in refinery operations and as fuel oil residues. These include fluoranthene, chrysene, mineral spirits, and refined oils. Petrochemicals are the bases from which volatile organic compounds (VOCs), plastics, and many pesticides are made. These chemical substances are often toxic to humans and the environment.

Polycyclic Aromatic Hydrocarbons or Polyaromatic Hydrocarbons (PAHs): PAHs, such as pyrene, are a group of highly reactive organic compounds found in motor oil. They are a common component of creosotes and can cause cancer.

Polychlorinated Biphenyls (PCBs): A group of toxic chemicals used for a variety of purposes including electrical applications, carbonless copy paper, adhesives, hydraulic fluids, microscope emersion oils, and caulking compounds. PCBs are also produced in certain combustion processes. PCBs are extremely persistent in the environment because they are very stable, non-reactive, and highly heat resistant. Burning them produces even more toxins. Chronic exposure to PCBs is believed to cause liver damage. It is also known to bioaccumulate in fatty tissues. PCB use and sale was banned in 1979 with the passage of the Toxic Substances Control Act.

Potentially Responsible Parties (PRPs): Parties, including owners, who may have contributed to the contamination at a Superfund site and may be liable for costs of response actions. Parties are considered PRPs until they admit liability or a court makes a determination of liability. This means that PRPs may sign a consent decree or administrative order on consent [see Administrative Order on Consent] to participate in site cleanup activity without admitting liability.

Remedial: A course of study combined with actions to correct site contamination problems through identifying the nature and extent of cleanup strategies under the Superfund program.

Sediment: The layer of soil, sand and minerals at the bottom of surface waters, such as streams, lakes, and rivers that absorb contaminants.

Sludge: Semi-solid residues from industrial or water treatment processes that may be contaminated with hazardous materials.

Stripping: A process used to remove volatile contaminants from a substance [see Air Stripping].

Trichloroethylene (TCE): A stable, colorless liquid with a low boiling point. TCE has many industrial applications, including use as a solvent and as a metal degreasing agent. TCE may be toxic to people when inhaled, ingested, or through skin contact and can damage vital organs, especially the liver [see also Volatile Organic Compounds].

Upgradient: An upward slope; demarks areas that are higher than contaminated areas and, therefore, are not prone to contamination by the movement of polluted groundwater.

Volatile Organic Compounds (VOCs): VOCs are made as secondary petrochemicals. They include light alcohols, acetone, trichloroethylene, perchloroethylene, dichloroethylene, benzene, vinyl chloride, toluene, and methylene chloride. These potentially toxic chemicals are used as solvents, degreasers, paints, thinners, and fuels. Because of their volatile nature, they readily evaporate into the air, increasing the potential exposure to humans. Due to their low water solubility, environmental persistence, and widespread industrial use, they are commonly found in soil and groundwater.

Wetland: An area that is regularly saturated by surface or groundwater and, under normal circumstances, capable of supporting vegetation typically adapted for life in saturated soil conditions. Wetlands are critical to sustaining many species of fish and wildlife. Wetlands generally include swamps, marshes, and bogs. Wetlands may be either coastal or inland. Coastal wetlands have salt or brackish (a mixture of salt and fresh) water, and most have tides, while inland wetlands are non-tidal and freshwater. Coastal wetlands are an integral component of estuaries.